



King's Research Portal

DOI:

[10.1080/1360080X.2016.1174407](https://doi.org/10.1080/1360080X.2016.1174407)

Document Version

Peer reviewed version

[Link to publication record in King's Research Portal](#)

Citation for published version (APA):

Liu, Y., Green, A., & Pensiero, N. (2016). Expansion of higher education and inequality of opportunities: a cross-national analysis. *Journal of Higher Education Policy and Management*, 38(3), 242-263.
<https://doi.org/10.1080/1360080X.2016.1174407>

Citing this paper

Please note that where the full-text provided on King's Research Portal is the Author Accepted Manuscript or Post-Print version this may differ from the final Published version. If citing, it is advised that you check and use the publisher's definitive version for pagination, volume/issue, and date of publication details. And where the final published version is provided on the Research Portal, if citing you are again advised to check the publisher's website for any subsequent corrections.

General rights

Copyright and moral rights for the publications made accessible in the Research Portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognize and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the Research Portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the Research Portal

Take down policy

If you believe that this document breaches copyright please contact librarypure@kcl.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.

Expansion of Higher Education and Inequality of Opportunities: a cross-national analysis

Ye Liu, Andy Green and Nicola Pensiero¹

Introduction

The national and international competitions of higher education have profound implications on the expansion of the opportunities. Higher education expansion has enduring public and private benefits both in developing and developed countries. Particularly the competition between countries in the era of the knowledge economy became the driving force to expand higher education system since the 1980s, such that many countries now have mass higher education systems (Marginson, 2015 forthcoming). This is widely believed to benefit national economies at a time when technological innovation and increased global economic competition demand countries shift their production and services increasingly into the high-value, high skilled knowledge-based sectors to maintain competitiveness and living standards (Brown et al, 2001). The public, non-market benefits of higher education are also believed to be considerable in terms of enhancing social trust, civic engagement and tolerance (McMahon, 2010).

However, as higher education becomes massified, it becomes increasingly diversified and differentiated (Marginson, 2015 forthcoming). This is partly a result of higher education seeking to respond to the more diverse needs of its broader clientele. But it also reflects the pressures on states from the national and international rankings to have elite universities which compete well internationally and the needs of governments to economise on costs by focusing resources on their elite research institutions whilst economising on provision in primarily teaching institutions. The results in many countries seem to be that university types are becoming more disparate and hierarchies of institutions and subjects more pronounced. Some questions arise from the debates on the massification and diversification of higher education: how have stratified and differentiated systems affected higher education opportunities by different social groups? Whether was it a case of broken promises for graduates from less prestigious institutions?

Two lines of inquiry dominated this debate. One line of argument primarily focused on rising inequality at the wider societal/structural level and its implications on access and

¹ Author correspondence: Ye Liu, Bath Spa University: y.liu@bathspa.ac.uk; Andy Green, UCL Institute of Education: Andy.Green@ioe.ac.uk; Nicola Pensiero, UCL Institute of Education: n.pensiero@ioe.ac.uk

outcomes of higher education. Extreme levels of inequality, such as are now appearing, not only represent a major challenge to social cohesion; they are also associated with negative social outcomes across a range of areas: from public health and well-being, to social trust, political engagement, social mobility and crime (Wilkinson and Pickett 2009; Green et al., 2006; Green and Janmatt, 2011). Globalization and changes in the deep structures of modern capitalism may be responsible for much of the longer term economic change (Piketty, 2013). This rising inequality impacts on both the drivers and outcomes of higher education since higher education is a key mechanism in the distribution of future life chances for new generations.

While expansion of higher education has generally be seen as a democratizing process which will contribute towards greater equality, these claims are now contested, as some argue that differentiated mass higher education may even be to contributing to greater inequality (Carnoy, 2011). The greater heterogeneity in quality across institutions is already reflected in the increasing differentiation in the value on the labour market of degrees from different institutions and in different subjects (Green and Zhu, 2010; Reimer et al, 2011). At the same time graduate labour markets have become more globalised and competitive (Brown et al, 2011), raising concerns about whether the promises of graduate careers can be fulfilled (Brown et al, 2011). Many countries have experienced substantial declines in earnings in middle class jobs over several decades, and this process has been intensified since the onset of the economic crisis and the ensuing austerity measures after 2008 (Hutton, 2011).

Another line of inquiry examined the expansion of higher education and the implications on social mobility from the perspective of the Maximally Maintained Inequality thesis. The studies followed the social origin-higher education attainment paradigm in different individual contexts (Shavit et al. 2007; Jackson et al. 2006). Shavit et al. found that a general increasing participation in higher education during the expansion by different social groups in eleven developed countries (for example, Shavit et al. 2007). Increasing diversification of higher education affected choices in fields of study by different social groups. A strong correlation between students' socioeconomic characteristics, such as socioeconomic status and parental education, and their destinations in types of universities was confirmed by Jackson et al.'s study of Western European countries (Jackson et al. 2006) as well as Ayalon and Yogev's research on Israel (Ayalon and Yogev 2005). The MMI theory

may hold in general but that national contextual differences mean there is considerably variation across countries in the relationship between increased participation and reduced inequality of higher education participation. This study attempts to fill the gap of researching higher education by comparing the trends in different groups of countries.

Comparative education researchers have long tradition of identifying countries with similar and distinctive system characteristics which are said to represent a particular type or 'model' of education. Increasingly sophisticated statistical techniques, using multiple cross-sectional times series datasets, are now used to explain the effects of system characteristics on learning outcomes across countries (Hanushek and Wößmann, 2010). These techniques have not, for the most part, been applied to higher education. However, we seek here to make a start in this using primarily descriptive data on characteristics and outcomes of HE systems in different countries and groups of countries, including the liberal market countries (the UK, the US, Canada, Australia and New Zealand), the social democratic countries (Finland, Sweden, Norway, Iceland and Denmark), the Mediterranean countries (France, Spain, Italy, Portugal and Greece), the German speaking countries (Germany and Austria), the Northern states (the Netherlands, Luxemburg) and the East Asian societies (Japan and South Korea).

At the theoretical level, we will assess the extent to which the theory of the Maximally Maintained Inequality could provide explanations on cross-national trends in access to higher education. At the empirical level, we will present the cross-cohort changes in inequality of opportunities then use comparative data on changes in financing and governance which show how high costs and low government support mitigate the relationship between expansion and inequality reduction. We do this by examining trends across OECD countries for which we have the best data, using a variety of indicators.

The Maximally Maintained Inequality

Central to the sociological debates on the implications of the expansion of educational opportunities is whether it increases inequality as the privileged social groups gate-keep their advantages or whether it reduces inequality by providing wider access for the disadvantaged groups. The Maximally Maintained Inequality (MMI) theory was developed to analyze cross-cohort changes in the impact of socioeconomic characteristics on educational participation (Lucas 2001). This theory outlines two prerequisites and three scenarios. The prerequisites of the Maximally Maintained Inequality included an increasing

demographic base for education and an 'upgrading' of social class. Both conditions were illustrated in the expansion of middle-class and the improving literacy level in most Western industrial societies since the 1960s. The three scenarios described the complicated relations between the demand for higher education among different social groups and the supply of the opportunities. The first scenario is persistent social inequality when higher education started to expand and increase enrolments mainly because the demand for higher education increased for middle-class or privileged social groups but remained the same for working-class or unprivileged people. The second one is declining inequality when access to higher education became universal for privileged social groups and the demand for higher education also increased for underprivileged class. The last scenario is increasing social inequality when sociopolitical circumstances changed and public support for the expansion declined. The most significant aspects of the MMI are the last two scenarios. The MMI suggests that the effect of social class on educational attainment should decline after a given level of education becomes universal for the upper social class (Raftery and Hout 1993). While they have reached a threshold, the expansion of educational opportunities allows lower social groups to advance. The MMI theory argues that socioeconomic characteristics impact more significantly on educational attainment at the higher educational level rather than at the basic level, because this is where the ceiling is reached. However, this raises the question of the threshold or the saturation point of universal access.

Some studies tested the validity of the MMI theory in the context of the expansion of higher education opportunities and calculated the threshold, after which social inequality decreases, for example, in the comparative study on stratification in higher education by Shavit et al. (2007). This defined the saturation point as the level at which 'nearly all sons and daughters of advantaged origins attain' higher education (3). Before the saturation point, they argued that class inequality persisted or increased when higher education expanded. In their thirteen cases, 80 per cent of eligible population who had access to higher education was defined as the saturation point (Shavit et al, 2007:17). The statistical results partly confirmed the MMI theory as social inequality in access declined in Israel and Italy where the 80 per cent of the saturation point was reached (Shavit et al. 2007; Recchi, 2007). However, two other East Asian cases, Japan and Taiwan, showed clear decline in

social inequality *before* they reached the elite saturation point (Ishida, 2007; Tsai and Shavit, 2007).

In this sense, the MMI theory works at a very general level but it is not sufficient to explain specific country contexts in particular regard to the class structure and HE policy. Shavit et al.'s study did not provide sufficient answer to the exceptional case of Taiwan and Japan. Inequality would decline prior to elite saturation when the lower social groups were winning a higher share of the new places available than elite family children. Under what circumstances would this case occur? If the attainment of lower social groups in a mass upper secondary education system were rising fast, and the HE entrance system was quite meritocratic (as in Japan and Taiwan) that lower social group would compete better for places than the less able amongst the elite.

Liu's empirical research on socioeconomic participation in higher education during China's massive expansion since the 1990s extended the MMI theory and addressed contextual features of China (Liu, 2013). The empirical findings encompassed some aspects of the MMI arguments, confirming a certain degree of socioeconomic and cultural selectivity in access to higher education. However, the most novel finding is that geographical inequality and the HE recruitment 'quota' policy played a more significant role of stratifying access to higher education (Liu, forthcoming). Moreover, Liu's separate study also suggested that the demographic policy, namely the 'one-child' policy, played an essential role in determining students' opportunities in elite universities (Liu, forthcoming).

Mountford-Zimdars et al.'s research investigated access to higher education opportunities in the particular context of the changes in policy on tuition fees and student loans in the UK in 2009 (Mountford-Zimdars et al. 2013). The 2008/2009 economic recession resulted in the austerity measure endorsed by the British coalition government since 2009. In education policy, one of the significant changes was the massive increase in the HE tuition fees which raised the typical tuition costs from 3000 to 9000. Mountford-Zimdars et al. analyzed the patterns of public attitude and support regarding the tuition fees and they found out that the middle class families showed strong support for the fees and even differentiated fees for different fields of study, while working-class students were very concerned about the fees and implications on the students' debt. They used the term of 'pulling up the ladder' to illustrate how advantaged social groups used the tuition fees to

safeguard their children's higher education opportunities and further employment (Mountford-Zimdars et al. 2013).

These studies showed that MMI works in general terms but it does not sufficiently take into account specific country differences in the strength of the relationship between participation rates and inequality of HE Opportunity. In this article, we will substantiate this with our comparative data on changes in financing and governance which show how high costs and low government support mitigate the relationship between expansion and inequality reduction. We will start with empirical evidence that highlights the cross-cohort changes in inequality of opportunity for higher education qualifications.

Trends in inequality of opportunity in access to higher education

Comparable data is often not available over time for a large number of countries, so comparisons of levels of inequality in different countries and their changing patterns over time can be difficult. What we can contribute here is a brief analysis of what a very recent survey conducted across 24 countries and regions in 2011 tells us about the cross national patterns in inequality of access to HE and how these are changing. We estimate changes over time on the basis of data for different age cohorts in a cross sectional survey, on the assumption that most HE qualifications are attained before the age of 25 and that cohort qualification rates provide a good proxy for qualification rates in different periods.

The data comes from the recent OECD Survey of Adult Skills conducted amongst 16-64 year olds in 2011 across 22 countries (plus two country regions). The survey contains data on the highest qualifications held by respondents and their parent's levels of education. Using a technique frequently used in higher education mobility studies, we are therefore able to compare the chances of gaining a higher education amongst groups with parents educated to different levels. In this case the data on respondents' parents' education is restricted to three levels, differentiating between those with graduate parents, those who had a parent who achieved an upper secondary qualification and those who had a parent who achieved no more than lower secondary qualifications. Since the error terms in the data for the lowest category are often too large, we restrict ourselves to comparing the chances of HE graduation amongst respondents with graduate parents and the rest. Relative chances are presented in terms of odds ratios which gives the ratio of the probabilities of each group of getting an HE qualification. Thus, if the chances of children with graduate parents getting an HE degree is 80 per cent and the chances of children of non-graduate

parents getting an HE degree is 40 per cent the relative odds for the two groups (or odds ratio) is 2. Chart 1 shows by country and age cohort the relative chances of children of graduate and non-graduate parents of getting a higher education qualification at level ISCED 5 (A or B) or higher. Chart 2 focuses on the 25-34 year olds in SAS and plots for the range of countries the attainment rate for HE qualifications (which proxies for participation rates) against the social gaps in achievement (using odds ratios again).

[Chart 1 about here](#)

The first observation to make from Chart 1 is that the advantage of children of children of graduate parents in getting HE qualifications has declined through the generations in all countries except Northern Ireland. Given that nearly all HE qualification are gained between the ages of 20 and 25, the four cohorts are proxying for graduation rates in each of four decades from the 1970s through to the 2000s when those aged 25-34 in 2011 were graduating. We can therefore say that inequality of opportunity for higher education, measured in terms of social background effects, has been decreasing over the four decades in each country except Northern Ireland. The steepest declines have generally been in the less developed or less affluent countries, such as Cyprus, Korea, Spain and the Slovak Republic, but the Netherlands has also shown sharp declines in inequality. By contrast a few countries, including England, Sweden and the USA, have seen only very small declines in inequality.

[Chart 2 about here](#)

The second observation we can make, from Chart 2, is that there is a significant relationship between rates of qualification and inequality of opportunity for HE qualification. Countries with higher qualification rates (and therefore participation rates) do tend to have smaller social gaps in attainment of HE qualification, as measured in the odds ratios. This would suggest that as you increase participation in HE there tends to be an equalisation effect in terms of the chances of children from different social groups (by parental education level) attaining HE qualifications. However, two qualifications need to be made here. Firstly we are only able to differentiate between the two social groups – those with graduate parents and the rest. We do not know from this whether the relative chances of attaining HE qualification from those with parents in the lowest educational category are improving relative to the chances of the children from graduate parents.

The second point to make it that although the relationship is significant there is considerable variation across countries in the relationship, with a number of outliers. For instance, amongst countries the average levels of participation and attainment, there are some, including France, Northern Ireland and Poland, where social gaps in attainment remain very high, whereas as others, like Germany, Sweden and Austria, where the social gaps are relatively low. So inequality of opportunity in higher education varies substantially between countries with similar participation and attainment rates.

Chart 1, shows that inequality of opportunity for HE qualification varies quite substantially across countries. For the youngest cohort, aged 25-34 in 2011 and graduating in the 2000s, inequality of opportunity is lowest in Finland where the chances of graduating from HE were only 2.09 times higher amongst the children of graduate parents than the children of non-graduate parents. At the other end of the scale was the Slovak Republic where children of graduate parents were 5.84 times as likely as children of non-graduate parents to get an HE degree. In terms of the comparison between country groups, a few clear patterns emerge. The Nordic countries are all ranked quite low in terms of inequality of opportunity with Finland at the bottom and Sweden, Norway and Denmark, respectively third, fifth and seventh from the bottom (out of the 18 countries and country regions shown here). The social market countries are mostly relatively egalitarian also, with Austria, Germany and the Netherlands, respectively, second, sixth and ninth from the bottom. Only Flanders, amongst this group is towards the more unequal end of the ranking. The two East Asian countries are rather disparate, with Korea fourth from the bottom in terms of inequality and Japan in eleventh place. By contrast inequality of opportunity is relatively high in all the Mediterranean countries, including Cyprus, France and Spain. The liberal English-speaking countries are quite disparate but all are in the top half in terms of level of inequality.

These two findings broadly confirm the MMI theory in comparative perspective. However, what do we have as explanations for differentiated pattern across countries? Inequality of opportunity has reduced most rapidly in developing countries (Slovak R.) or recently developed countries (such Spain, Japan and Korea) and in Nordic countries. HE attainment gap is lowest in Nordic and German-speaking countries (despite lower rates of participation in the latter). Liberal countries have not improved much and have relatively high inequality of opportunity (despite high rates of participation). How can we explain

these divergences from the general pattern of higher participation being associated with lower inequality? There are three main contenders from the findings. First, higher education tuition fees in liberal countries might reduce tendency towards equalisation from high participation. Second, less hierarchical HE systems and the participation in Type B institutions in the Nordic and German-speaking countries might reduce inequality. Third, greater public support and entitlements might reduce inequality of access. We will use a series of indicators to assess each contender and explore the extent to which we can explain divergent inequality patterns across different countries.

Trends in participation rates by country group overall and by different types

Trends in access to higher education can be analysed in different ways. We use the method which looks at the proportion of different birth cohorts who gain higher education qualifications, and to make deductions from this about trends over time in qualification rates. The data compiled by the OECD from labour force surveys on the highest qualifications held by adult populations in different countries. This method has the merit of including qualifications that were gained outside the country in question. We take the data for the different age groups from different survey years to establish higher education qualification rates of successive age cohorts which typically undertook their higher education in each decade from the 1980s. Since very few higher education qualifications are acquired after the age of 25 the slight variation in the survey years will make little difference to the figure for qualification gained by different cohorts.

The data will be presented on the proportion of different birth cohorts who had attained a tertiary (ISCED 5 Type A or B) qualification at the time of the survey from which the data were taken. OECD defines ISCED 5 A and B programmes as long cycle programmes in either general (A) or vocational areas (B), so these correspond to what is normally referred to as higher education on a broad definition, which includes bachelor style degrees, normally lasting three to four years, obtained in traditional universities or polytechnic-type institutions. Since the vast majority of HE graduates have undertaken their undergraduate degrees between the ages of 18 and 25, and typically between 18 and 23, we use these age ranges to estimate the output of HE qualifications during different time periods. The birth cohorts are selected to represent higher education qualifications rates in each decade from the 1980. The age group which was 35 to 44 in 2008 were born between 1964 and 1973 and

typically started their undergraduate education, aged 18, between 1982 and 1991.² Their HE qualification rates represent the output of tertiary education in the 1980s. The youngest age group, those aged 25 to 34 in 2011, were born between 1977 and 1986 and typically started undergraduate higher education between 1995 and 2004. They are the youngest birth cohort for which we have highest qualification level data from labour force surveys. They can be used to proxy the outputs of higher education in the period between 1995 and 2004, which is as up to date as we can get using this method.

Chart 3 provides a detailed comparison of rates of HE qualification of the cohort 1964-73 and the cohort 1977-86, representing the expansion between the 1980s and 2000s by each country, organised into country clusters. The English-speaking countries had relatively high participation rates compared with most other country groups. They were now joined by the UK. But the East Asian countries (Japan and Korea), had far higher participation rates than other countries. By contrast, participation in some of the social market countries, such as Austria and Germany, was relatively low, and lower than in some Eastern European countries, such as Poland and Hungary. Mediterranean countries exhibited quite differentiated patterns of participation, with Italy, Portugal and Turkey having much lower qualification rates than France, Greece along with several other smaller states in northern Europe (including Belgium, Ireland, Luxembourg, the Netherlands, and Switzerland).

Chart 3 about here

Many countries had thus developed mass participation higher education systems by the 2000s. More than two-thirds of the age cohort attained HE qualifications in Japan and Korea; and nearly half of the eligible population on average had higher education qualifications in liberal market countries, including Canada, Australia, the US, and the UK. In the Nordic countries, the smaller northern European countries and in France and Spain, participation had reached around 40 per cent. However, many countries were still well short of majoritarian HE participation and HE qualification. Two of the social market countries, Austria and Germany, had only reached qualification rates of 21 and 28 per cent respectively. Greece and Portugal ranked in the middle spectrum for the Mediterranean cluster with around 30 per cent of the age cohort qualifying in higher education but the rates were only 21 per cent in Italy and 19 per cent in Turkey. Among Eastern European

² Survey data from 2008 (OECD, 2010).

countries, Poland achieved the highest rates (at 39 per cent) by 2000s, ten per cent points higher than their Eastern European counterparts.

Chart 4 about here

The changes in the rank ordering of countries on qualification rates between the 1980s and 2000s is indicative of varying rates of higher education expansion across countries and country groups in the intervening period. Chart 4 demonstrates the changes in the participation rates in these country groups. In terms of the change in qualification rates between the 1980s and 2000s, the East Asian countries, Japan and Korean, experienced the most dramatic increase in higher education qualification with an average 33 percentage point increase in the rates, so that two-thirds of the cohorts were achieving higher education qualifications in 2000s compared to their relatively low participation rates in the 1980s. Small northern European small states, such as the Netherlands, Luxembourg and Switzerland, also experienced relatively fast expansion with on average 17.4 percentage point rises in higher education qualification between the 1980s and 2000s. By contrast, social market countries, including Austria and Germany, had the least change with only three percentage point increases on average in qualification rates between the 1980s and 2000s. Mediterranean countries and Eastern European countries also achieved more than 15 per cent point rises in higher education recruitment, while around a 10 to 14 percentage point increases was observed in the social democratic and liberal market countries.

Charts 5 and 6 show the qualification rates in the two different types of programme for the two birth cohorts (1964-1973; 1977-1986) who would participate in tertiary education in the 1980s and from 1995 to 2005. During the period, in the East Asian countries, qualification rates from type A programmes increased rapidly, whilst qualification rates from type B programmes remained steady. Among liberal market countries, two trends were observed. Australia, the UK, the USA and New Zealand experienced rapid increases in qualification rates from type-A programmes, while their type-B programme qualification rates substantially declined. By contrast, Canada increased its type-B qualification rates at the same time as increasing its type A qualification rates. The dominant pattern in the liberal states, of increasing type A qualification rates and diminishing type B rates, is also found in Social democratic countries, Social market countries, Eastern European countries and Northern European small states. The main exception to this pattern was in the East Asian States and in Southern European countries, such as France, Greece and Spain which

maintained or increased their type-B qualification rates at the same time as increasing their type A qualification rates.

[Chart 5 about here](#)

[Chart 6 about here](#)

Chart 7 illustrates the patterns of participation in type-A and type-B programmes in country clusters from 1980s to 2005. Although, in general, the expansion of type-A programmes has been responsible for most of the increase in HE qualification rates in almost all countries, there are some distinctive patterns within this trend. Countries which had the largest overall increases in HE qualification rates, including the East Asian countries (Korea, Japan) and some of liberal market countries (Canada and New Zealand), tended to have relatively strong type-B sectors and qualification rates. The countries whose HE qualification rate increases were least substantial, compared to other country clusters (see Chart 4), were the social democratic countries and the social market countries, where the type-B qualification rates shrank most dramatically over the observed period.

[Chart 7 about here](#)

Trends in the share of private contribution in HE

This section will present evidence on the cost of higher education in the OECD countries by highlighting the proportion of private contributions from 1995 to 2010. Then we will use country cluster analysis to examine the trends of the private contribution to higher education among different countries. Chart 8 illustrates the general trend from 1995 to 2010 in the proportion of total HE expenditure coming from private sources. It is clear from the data that there have been increasing private contributions to higher education in most of the OECD countries between 1995 and 2010 except in the social democratic countries including Denmark, Sweden, Norway, Finland and Iceland. Generally speaking, continental European higher education tends to be more publicly-funded than in East Asia, north America, Australia and the UK. But private contribution grew between 2003 and 2010 in most of the countries. By 2010, the OECD average privation contribution accounted for 31.63 percent of the total cost of higher education. The largest private contributions, of more than 60 per cent of the cost, were observed in Japan, Korea, the US and the UK.

[Chart 8 about here](#)

Chart 9 provides the trends in private contributions to higher education by country cluster from 1995 to 2010. East Asian societies (Korea and Japan) alongside the liberal

market countries, including Australia, Canada, the UK, the US and New Zealand, have had a much higher proportion of private contribution than other country clusters. Social democratic countries, including Denmark, Sweden, Finland, Norway and Iceland, still maintained state-funded higher education to a large extent with private contribution around 6 per cent by 2010. Within the social democratic countries, Sweden has had slightly higher privation proportion than the rest of the Nordic countries. Another case of low private contribution to higher education is the social market countries such as Austria and Germany. The private contribution in these two countries hardly changed between 1995 and 2010, accounting for around 10 per cent of the total higher education cost. Among Mediterranean countries, such as France, Spain and Italy, the private contribution has not changed significantly, rising to 25 per cent in 2010 from 21 per cent in 1995. Eastern European countries experienced slight increase in the private contribution from 18 per cent in 1995 to 25 per cent in 2010.

Chart 9 about here

When we compare Chart 9 with Chart 4 it would seem that countries with high proportions of private spending in education, such as East Asian countries and liberal market countries, also tend to have high HE growth rates. By contrast, the countries that experienced the slowest growth rates in higher education also had lowest private contributions to higher education spending. This suggests that HE expansion is driven more by government decisions on spending in HE than by student demand. In countries where the costs of HE enrolments to Government are higher, because of low tuition fees, governments may have deliberately restricted their supply. On the other hand, where costs are shared with students, there are less government restraints on numbers, and there is still an increasing number of students willing to pay – at least in these more affluent OECD countries. However, student calculations of costs will also affect their choices of fields of study, since these are often differentially priced.

Trends in the government support and public entitlements for HE students

However, access to higher education is not only affected by the cost of tuition. The availability of public support in the form of scholarships, student loans, and tax transfers will also shape student decision about participation. Chart 10 provides a snapshot for 2011 for different groups of countries of the extent of public support in the form of scholarships, student loans and other subsidies. It shows that social democratic countries spent the

highest among country clusters on these forms of support. Given the low/zero tuition fees charged in these countries, the net costs to students in higher education would appear to be relatively low. By contrast, East Asian countries spent the least in funding higher education and provided very weak public support in terms of scholarships and student loans. Since students have been contributing the majority tuition costs for higher education through fees, the costs of obtaining a higher education degree in East Asian countries are relatively high. The liberal market countries, including Australia, Canada, New Zealand, the US and the UK spent relatively large amounts in supporting students in higher education. However, much of this in countries such as the UK and the USA takes the form of loans, which have to be paid back at some point. So, whilst initial access may not be impeded by financial constraints, despite the high level of fees, in the long term private costs to higher education study are still relatively high and involve the accumulation of sizeable amounts of debt. The rest of European countries have lower level of public support for student participation, but fees are very low, so the net costs of participation to individual students are much lower.

Chart 10 about here

Employment opportunities

This section moves on to examine the graduate employment rates since the expansion of higher education. Data across countries demonstrate that employment rates of graduates from higher education are still relatively higher compared to those with non-tertiary qualifications. However, the financial crisis since 2008 complicated the whole picture of youth employment across different continents. There has been growing employment insecurity in the labour market. More specially, a rising flexibility measure in employment has been adopted such as temporary employment, part-time employment, and zero-hour contracts, which are regarded as a growing army of 'shadow labour' (Standing 2012). For example, full-time jobs dropped more than 650,000 within the first year of the recession in the UK with part-time jobs soaring up by 80,000.

There has been mounting evidence that many graduates with higher education degrees are trapped in low-paid, low-skilled jobs in order to fulfil an employment opportunity (Putnam, 2015; Silva, 2012; Felstead et al. 2012; Brinton, 2011). This phenomenon is coined as 'status discord' by Kosugi who analysed the youth employment in contemporary Japan. According to Kosugi (2008), younger generation with a higher level of education and qualifications have to accept jobs with lower status and lower pay; and this youth

generation are most likely to suffer status frustration. This status discord can be applied to explain youth employment in different contexts. It has been argued that massive production of higher education graduates resulted in the 'devaluation' of skills. Standing describes the university tuition debt and the discord between qualifications and job status as two traps facing the young graduates from higher education (Standing 2012).

This section will illustrate the general employment rates in the observed countries for the age cohort between 25 and 34. Chart 11 compares the employment rates between two cohorts-the younger 25-34 and the prime cohort 45-54 between 2000 and 2011. It is shown that the employment rates were generally higher for the prime cohort than for young cohort across most countries under investigation. East Asian countries have lowest employment rates compared to other countries given the highest private contribution to the tuition fees. The low employment rates in East Asian countries can be explained by the high participation rates in higher education, which did not match the labour market demand. Social market countries and Northern European small states have higher employment rates for university graduates.

Chart 11 about here

Discussion

What does this analysis tell us about specific country differences in the strength of the relationship between participation rates and inequality of HE Opportunity? The most rapid rises in participation and HE qualification during the past three decades have been achieved in the East Asian countries, which now have the highest HE qualification rates of any region. This has been achieved despite relatively high private costs to higher education and low levels of government support to students. We have not examined here the cultural factors that lie behind this rapid increase but we can at least say that it appears not to have been hampered by the high private costs involved in this case. The same may be said for the liberal countries, where there has also been rapid expansion, despite relatively high private costs to participation. These two groups of countries have been most successful in widening overall access to higher education but have taken somewhat different routes. The East Asian countries have rapidly increased participation in general academic programmes whilst keeping participation in vocational programmes stable. The liberal countries have rapidly increased participation in general academic programmes but at the cost of declining participation – until recently – in vocational programmes.

Relatively high participation rates have also been achieved in the Scandinavian countries and in the smaller social market countries of north-west continental Europe. Here, as in the liberal countries, high participation has been achieved through the expansion of general academic programmes, despite a decline in participation in vocational programmes. Private costs to students are relatively low in these countries (which retain minimal tuition fees, unlike in liberal and Asian countries) and state support to students is relatively generous. These factors will be increasing demand for higher education places, which, through generous government funding, has been largely met by generous public funding of institutions.

Participation rates achieved in the Mediterranean and two of the Social Market countries (Austria and Germany) are substantially lower. This is despite the generally relatively low fees charged. Lack of public financial support may be part of the explanation for this in the Mediterranean countries (although this has not deterred participants in the East Asian countries) but this does not apply to the same extent in Austria and Germany. In these two countries, it seems more likely that participation in higher education has been kept down intentionally by governments which have been keen to provide alternatives through various forms of high quality vocational training (Dual System Apprenticeships etc.).

Higher participation in full cycle higher education programmes is generally seen as a public economic and social benefit. It is also generally believed to be a democratising process which helps to increase equality in opportunities and outcomes in education. Our analysis here suggests that the relationship between participation rates and inequality of opportunities and outcomes is more complicated than this implies. The gap in the probabilities of children from different social backgrounds of gaining HE qualifications has generally declined in most countries. We saw from the analysis in Chart 1 of the odds ratios of HE qualification for children of graduates and non-graduate parents that the social gap in the probability of HE graduation declines through the age cohorts in most countries. However, inequality of opportunity for HE graduation is by no means lowest in countries with the highest participation rates. The liberal and East Asian countries, which have the highest average HE qualification rates, generally have relatively high inequality of opportunity, with the exception of South Korea which has achieved sharp declines in inequality of opportunity through the age cohorts. On the other hand, the Social Democratic Nordic countries, with lower rates of participation, have relatively low inequality of

opportunity. The contrast is even stronger with Austria and Germany, which have relatively much lower participation rates but much less inequality of opportunity than the countries with high participation rates.

The different patterns of expansion of higher education, privatization and marketization have had direct impact on employment opportunities. East Asian countries have lowest employment rates compared to other countries given the highest private contribution to the tuition fees while social market countries and Northern European small states have higher employment rates for university graduates. The countries which have been most successful in terms of increasing participation in higher education and achieving relatively low inequality of opportunity are the Nordic countries. These have generally maintained high employment rates and relatively high wage premia for younger graduates as well (although not for adult graduates as a whole). They may also prove to be the countries where rates of return are least likely to fall, since costs to graduates have been kept low at the same time as graduate wage premia are sustained. This should maintain high demand for higher education participation in these countries. However, the problem to be faced by their governments is that the public costs of the HE systems will increase to very high levels if the demand for higher education is met.

Conclusion

This article is a modest attempt to extend the comparative model of country groups to analyse the cross-national trends in the higher education expansion and opportunities. We use descriptive data on characteristics and outcomes of HE systems in different country groups, including the liberal market countries, the social democratic countries, the Mediterranean countries, the German speaking countries, the Northern states and the East Asian societies. At the theoretical level, we assess the validity of the Maximally Maintained Theory in the cross-national contexts. We confirm the MMI theory in general patterns of the expansion of higher education opportunities; however, we argue that it is not sufficient to provide accounts on specific country differences in the strength of the relationship between participation rates and inequality of opportunities. Therefore, we explain the divergences from the general pattern of higher participation being associated with lower inequality. We proposed three main contenders including the private contribution to higher education (the liberal countries), less hierarchical HE systems, the participation in type B HE and greater public

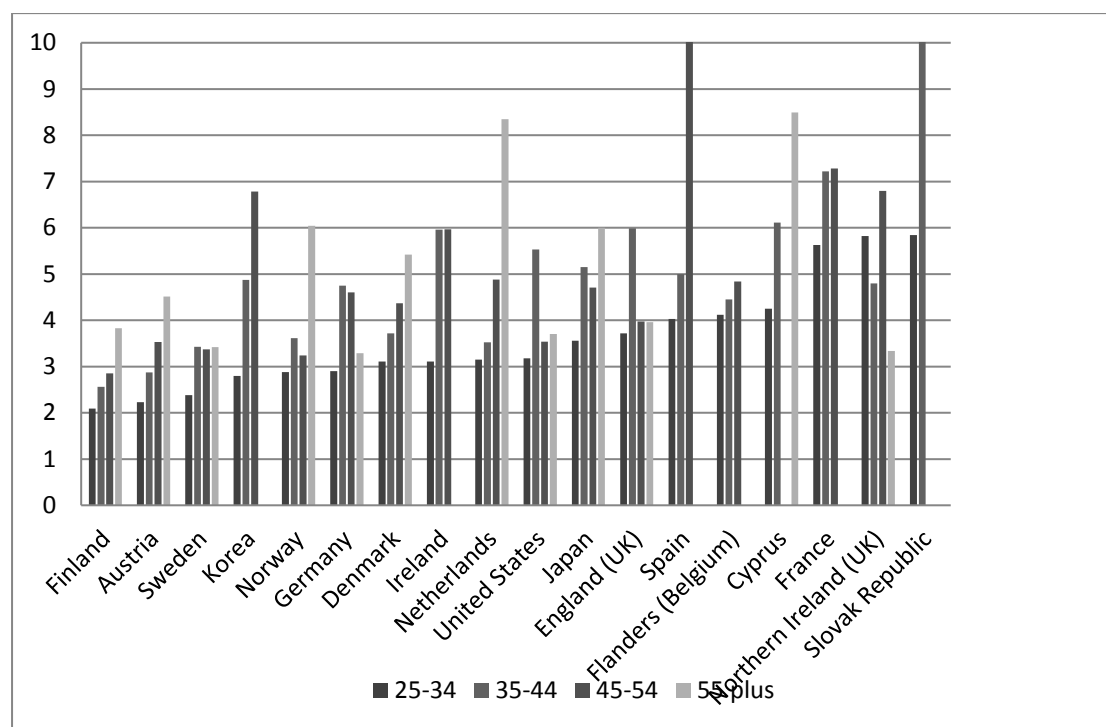
support and entitlements (the Nordic and German speaking countries). We used a series of indicators on the trends of participation in HE and different types of universities, the private contribution to HE, and the trends of public support and entitlements to assess the three contenders. Thus, we argue that there are different patterns of the trade-offs between expansion and equalising opportunities. Most rapid expansion in countries with high private contributions to HE and little government support for students mainly because governments can then afford more places but equalisation of opportunities from the expansion in these systems is limited because of financial barriers to access to less well off groups. Most egalitarian systems seem to have somewhat lower participation rates with lower fees and strong government support such as the Social Democratic and the German Speaking countries.

References

- Ayalon, H. and Yogeve, A. 2005. Field of Study and Students Stratification in an Expanded System of Higher Education: The Case of Israel. *European Sociological Review* 21(3): 227–41.
- Brinton, M. 2011. *Lost in Transition: Youth, Education and Work in Post-industrial Japan*. Cambridge: Cambridge University Press.
- Brown, P, A. Green and H. Lauder. 2001. *High Skills: Globalization, Competitiveness and Skills Formation*. Oxford University Press.
- Brown, P., H. Lauder and D. Ashton. 2010. *The Global Auction: The Broken Promises of Education, Jobs and Rewards*. New York: Oxford University Press: 224.
- Carnoy, M. 2011. "As higher Education Expands, is it Contributing to Greater Inequality?" *National Institute Economic Review* January 215: R34-R47.
- Felstead, A., F. Green and N. Jewson. 2012. "An analysis of the impact of the 2008-09 recession on the provision of training in the UK." *Work, Employment and Society* 26 (6): 968-986.
- Green, A., J. Preston and G-J. Janmaat. 2006. *Education, Equality and Social Cohesion*. Basingstoke: Palgrave.
- Green, A. and G-J. Janmaat. 2011. *Regimes of Social Cohesion: Societies and the Crisis of Globalisation*. Basingstoke: Palgrave.
- Green, F. and Zhu, Y. 2010. Overqualification, job dissatisfaction, and increasing dispersion in the returns to graduate education,' *Oxford Economic Papers* 62(4): 740-763.
- Hanushek, E. and L. Wößmann. 2010. *The Economics of International Differences in Educational Achievement*. Working Paper 15949. Cambridge, MA.: National Bureau of Economic Research.
- Hutton, W. 2011. *Them and Us. Changing Britain – Why We Need a Fair Society*. London: Little, Brown.
- Ishida, H. 2007. Japan: Educational Expansion and Inequality in Access to Higher Education. In (Eds) Shavit, Y., R. Arum and A. Gamoran. 2007. *Stratification in Higher Education: A Comparative Study*. Stanford, California: Stanford University Press. Pp.63-86.
- Jackson, M., R. Luijkx, R. Pollak, L. Vallet and H. G. van de Werfhorst. 2008. "Educational Fields of Study and the Intergenerational Mobility Process in Comparative Perspective." *International Journal of Comparative Sociology* 49: 369-388.
- Kosugi, R. 2008. *Escape from Work: Freelancing Youth and the Challenge to Corporate Japan*. Melbourne: Trans Pacific Press.
- Liu, Y. forthcoming. Geographical Stratification and the Role of the State in Access to Higher Education in Contemporary China. *Journal of International Education and Development*.
- Liu, Y. 2013. Meritocracy and the Gaokao: a survey study of higher education selection and socio-economic participation in East China, *British Journal of Sociology of Education*, 34:5-6, 868-887.
- Lucas, S. R. 2001. Effectively maintained inequality: education transitions, track mobility and social background effects. *American Journal of Sociology* 106: 1642-1690.

- Marginson, S. forthcoming 2015. "Global stratification in higher education" in Sheila Slaughter and Barrett Jay Taylor (eds.) *Stratification, Privatization and Vocationalization of Higher Education in the US and EU: Competitive advantage*. Dordrecht: Springer.
- McMahon, W.W. 2010. Higher Learning, Greater Good: the Private and Social Benefits of Higher Education. *Educational Philosophy and Theory*. 42(4): 504-506
- Mountford-Zimdars, A., Jones, S., Sullivan, A., and Heath, A. (2013) Framing higher education: questions and responses in the British Social Attitudes Survey, 1983-2010, *British Journal of Sociology of Education* 34(5/6):792-811.
- OECD. 2007, 2008, 2009, 2011, 2012 2013. Education at A Glance. Paris: OECD.
- OECD. 2010. *PISA 2009 Results: Overcoming Social Background. Equity in Learning Opportunities and Outcomes*, Volume 11. Paris: OECD.
- OECD. 2013a. *PISA 2012 Results: Excellence through Equity: Giving Every Student the Chance to Succeed. Volume 11*. Paris: OECD Publishing.
- OECD. 2013b. *Skills Outlook 2013: First Results from the Survey of Adult Skill*. Paris: OECD.
- Piketty, T. 2013. *Capital in the Twenty-First Century*. Cambridge, MA: Belknap.
- Putnam, R. D. 2015. *Our Kids: American dream in crisis*. New York: Simon & Schuster.
- Raftery, A. E. and M. Hout. 1993. Maximally Maintained Inequality - Expansion, Reform, and Opportunity in Irish Education, 1921-75. *Sociology of Education* 66(1): 41-62.
- Recchi, E. 2007. Italy: Expansion Reform, and Social Inequality in Higher Education. In (Eds) Shavit, Y., R. Arum and A. Gamoran. 2007. *Stratification in Higher Education: A Comparative Study*. Stanford, California: Stanford University Press: 400-420.
- Reimer, D., C. Noelke, C. and A. Kucel. 2008. "Labor Market Effects of Field of Study in Comparative Perspective: An Analysis of 22 Countries." *International Journal of Comparative Sociology* 49 (4-5): 233-256.
- Silva, J. M. 2012. *Coming up Short: working class adulthood in an age of uncertainty*. Oxford: Oxford University Press.
- Standing, G. 2011. *The Precariat: The New Dangerous Class*. London, UK: Bloomsbury Academics.
- Tsai, S. L. and Shavit, Y. 2007. Taiwan: Higher Education-Expansion and Equality of Educational Opportunity. In (Eds) Shavit, Y., R. Arum and A. Gamoran. 2007. *Stratification in Higher Education: A Comparative Study*. Stanford, California: Stanford University Press. Pp.140-164.

Chart 1: Probability of Gaining HE Degree of Children of Graduate Parents Compared with those of Non-Graduate Parents (Odds Ratios) by Age Cohort



Source: Survey of Adult Skills (OECD 2013b)

Chart 2: HE Qualification Rates and Inequality of Opportunity amongst 25-34 Year Olds by Country

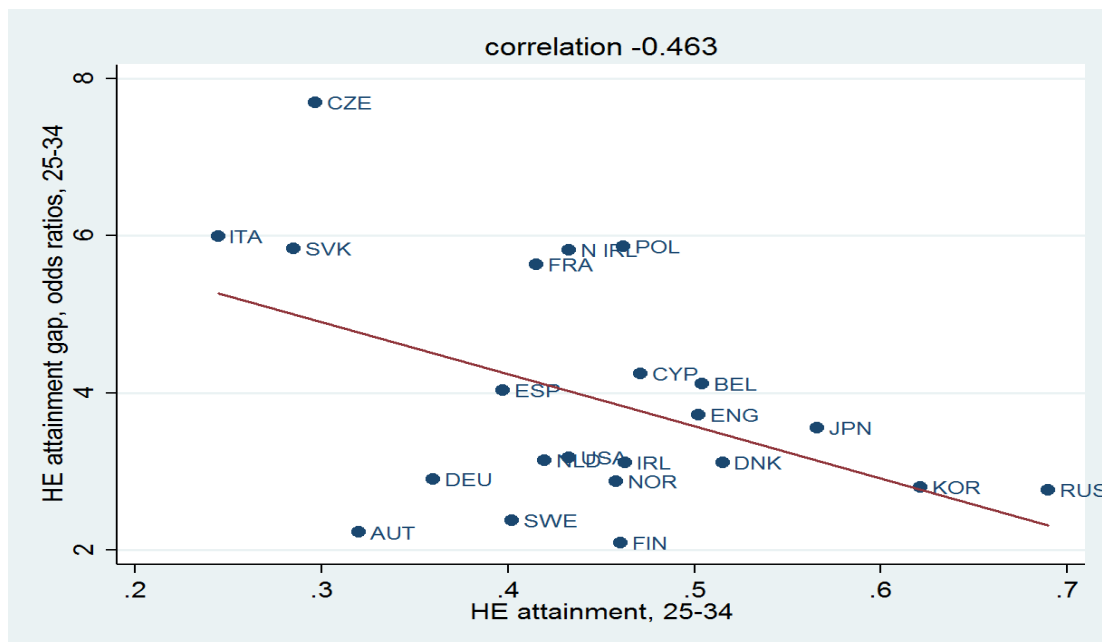
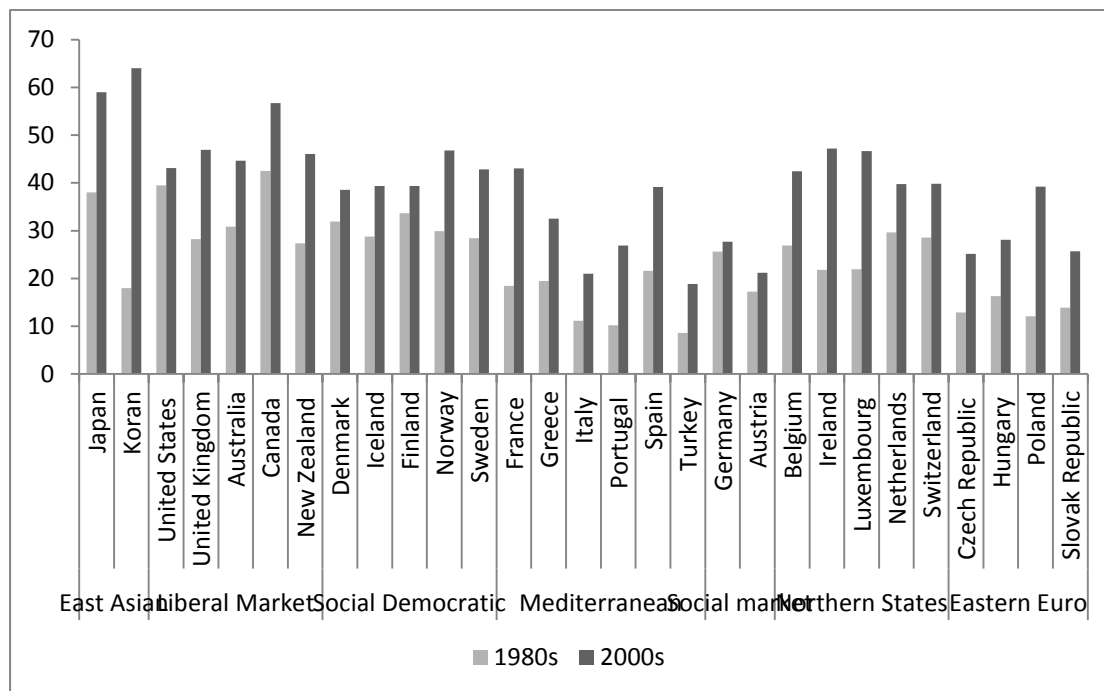
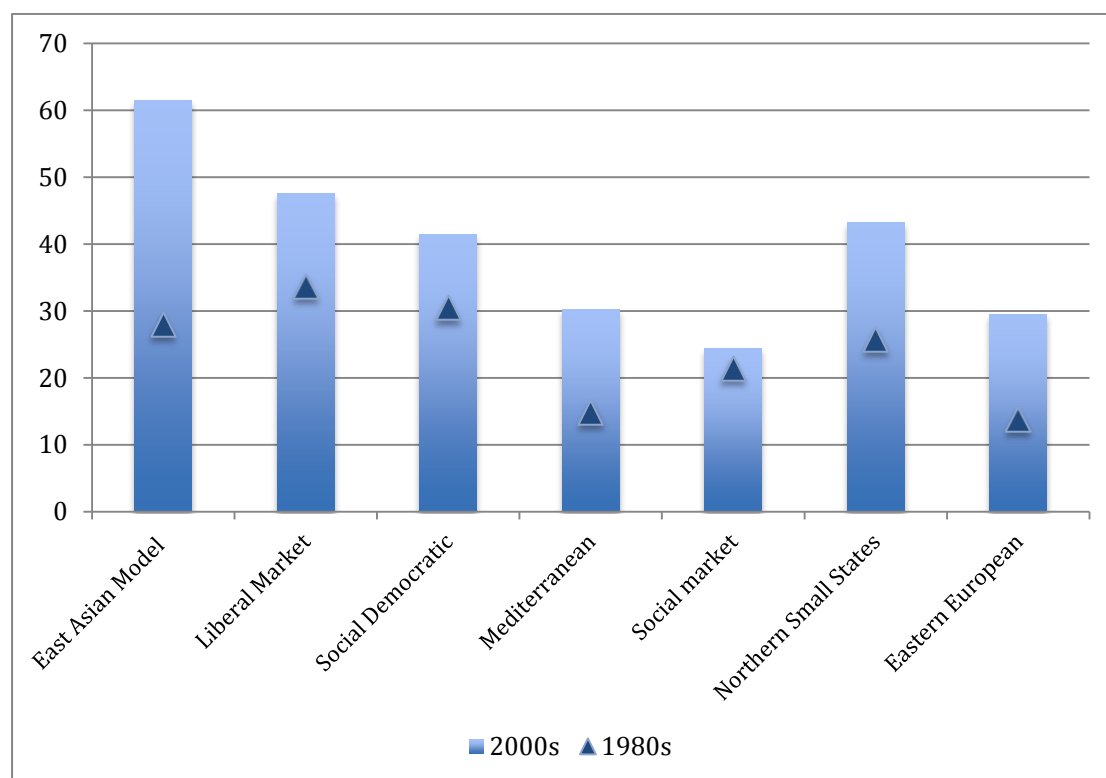


Chart 3: HE Expansion between 1980s and 2000s by country



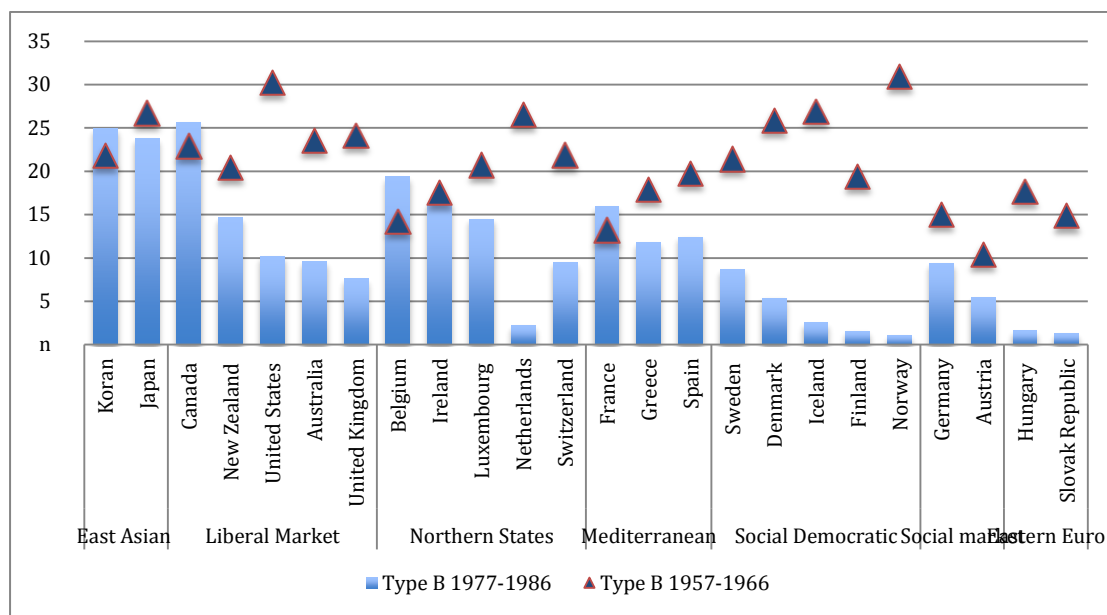
Data source: For 2000s, data are from Education at a Glance (OECD, 2013:37) Table A1.3a; For 1980s, data are from Education at a Glance (OECD, 2010:36) Table A1. 3a.

Chart 4: HE Participation rates between the 1980s and 2000s by country cluster



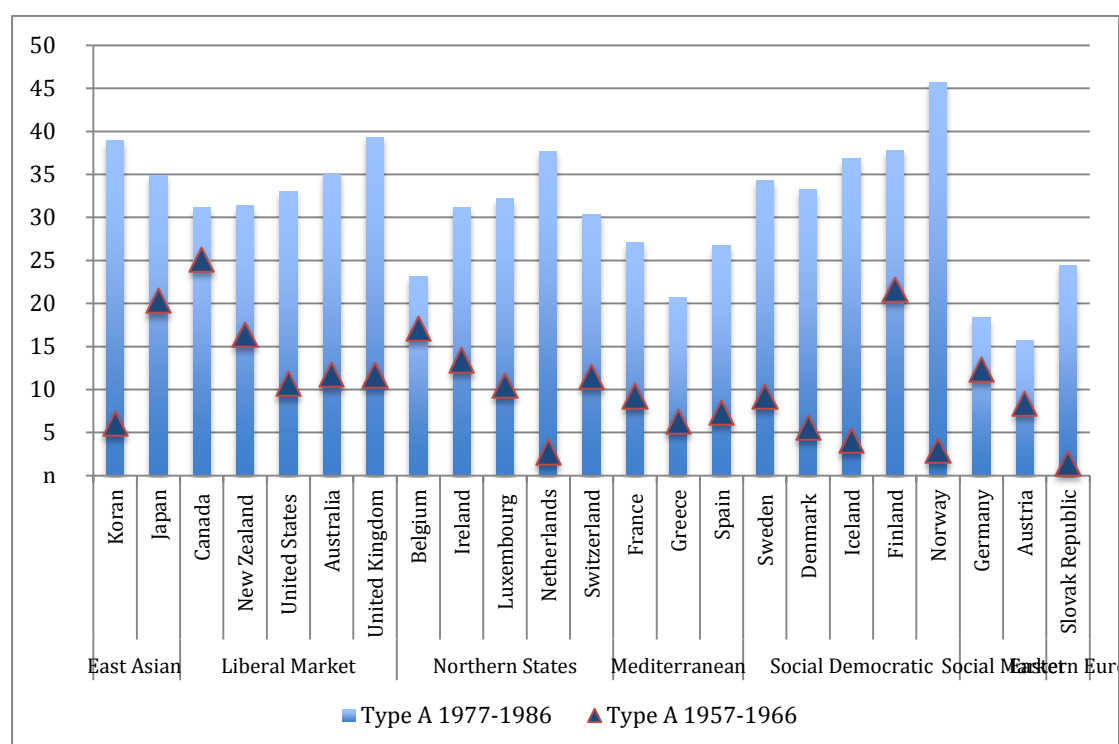
Source: Education at a Glance (OECD, 2013:37) Table A1.3a; Education At A Glance (OECD, 2010:36) Table A1.3a.

Chart 5: Participation in Type-B HEIs by the age cohort 1964-1973 and 1977-1986 in country cluster



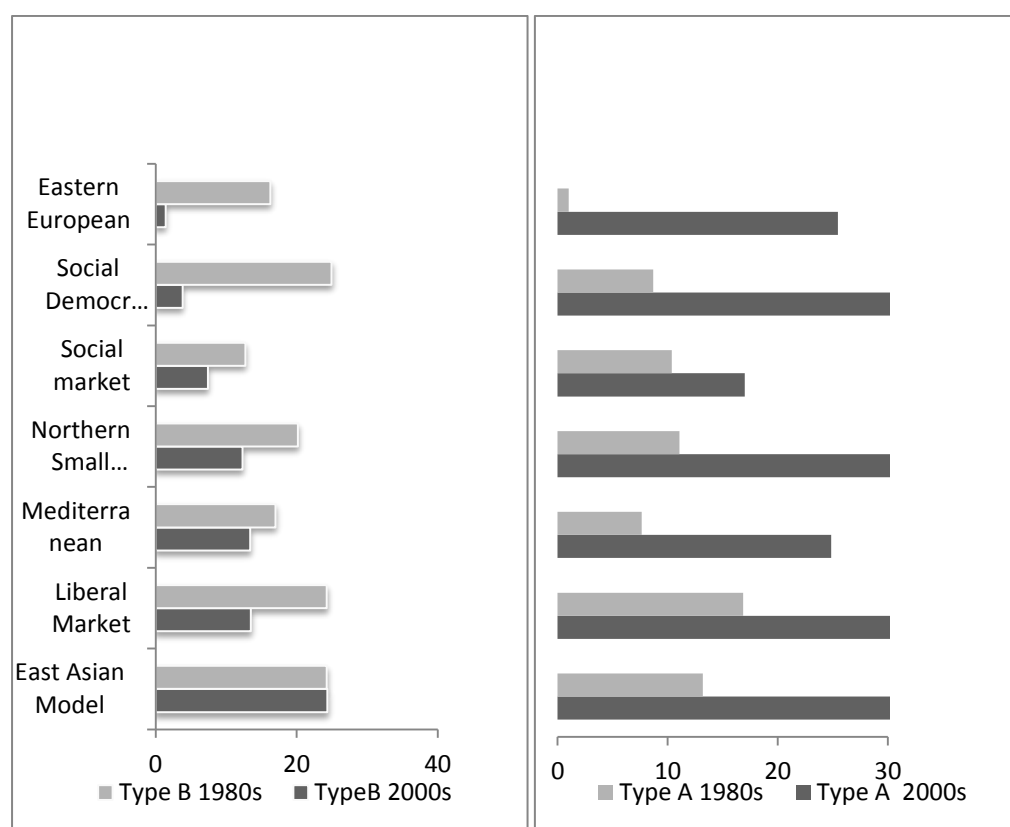
Source: Education at a Glance (OECD, 2013:37). Table A1.3a

Chart 6: Participation in Type-A HEIs by the age cohort 1964-1973 and 1977-1986 in country cluster



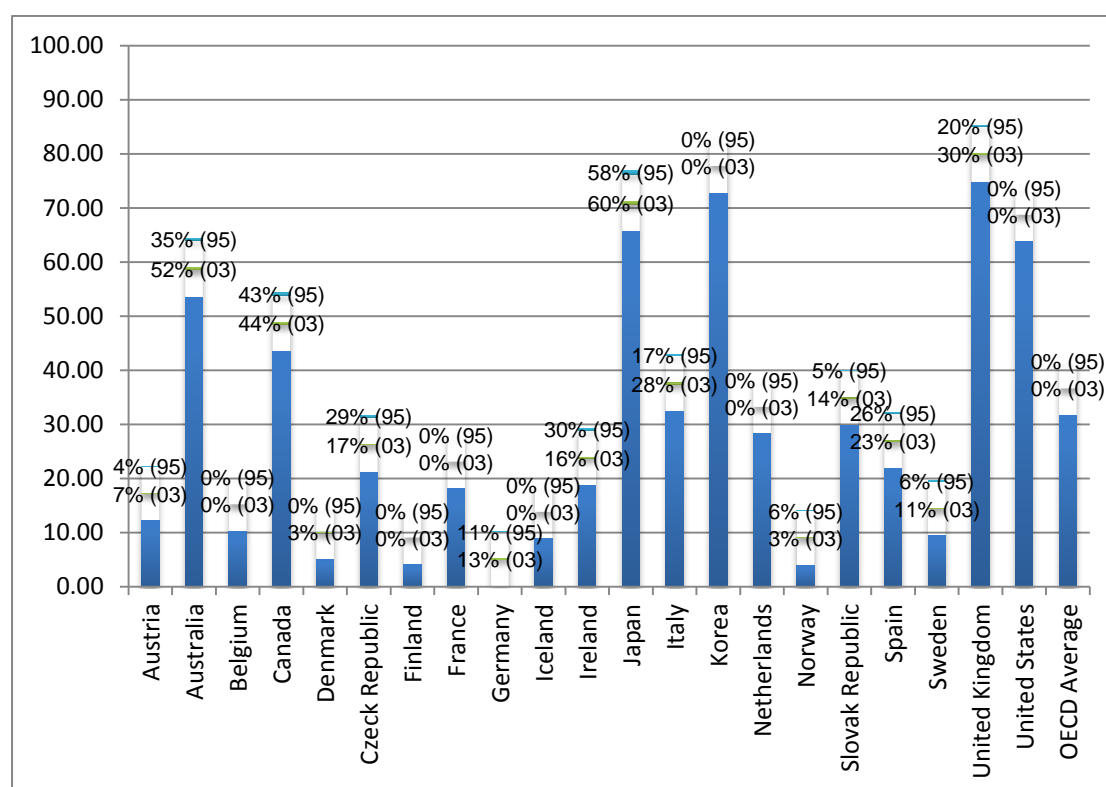
Source: Education at a Glance (OECD, 2013:37). Table A1.3a

Chart 7: Participation by HEI types between 1980s and 2000s by country cluster



Source: For 1980s, Education At a Glance (OECD, 2010:36) Table A1.3a Column Cohort 35-44. For 2000s, Education at A Glance (OECD, 2013:37) Table A1.3a Column Cohort 25-34. The two column cohorts represent participation in two types in the 1980s and 2000s.

Chart 8: Proportion of the Private Contribution to HE in 1995, 2003 and 2010



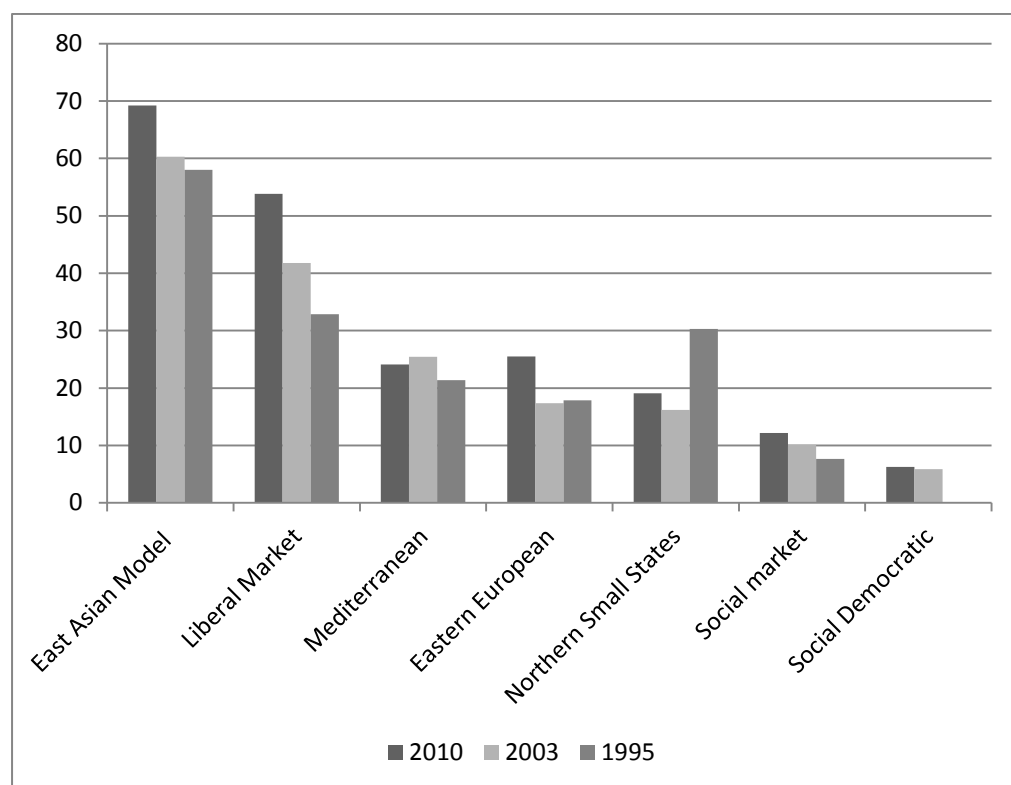
Source: For 2010, data are from Education At A Glance (OECD, 2013) Chart B3.1; For 1995 and 2003, data are from Education At a Glance (OECD, 2006) Table B3.2a.

Note: 1. The base data, which refer to the private contribution in 2010.

2. (95) refers to the proportion of private contribution in 1995.

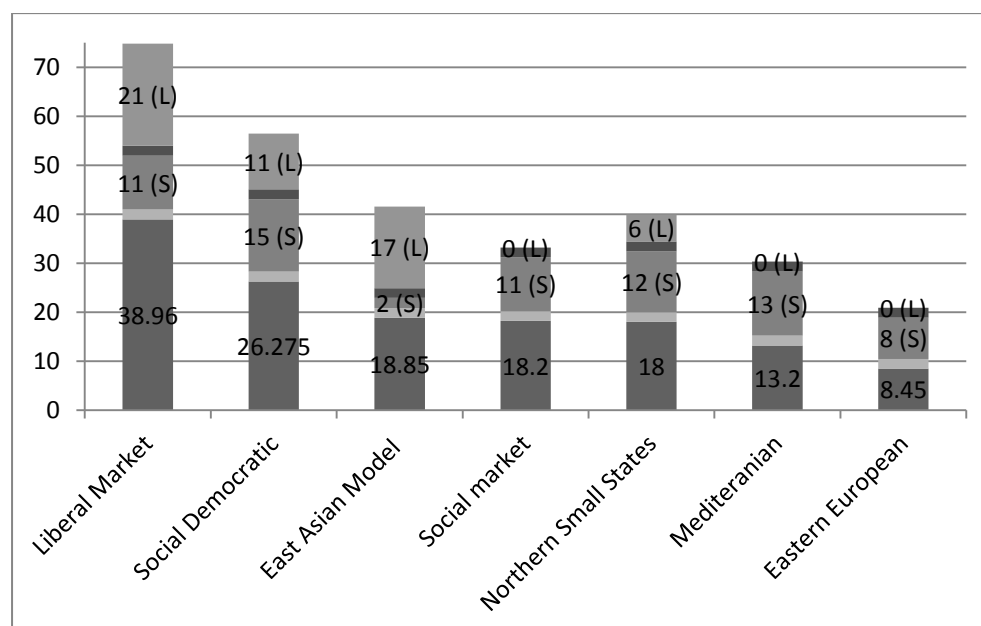
3. (03) refers to the proportion of private contribution in 2003.

Chart 9: The Trend of the Private Contribution to HE by country cluster from 1995 to 2010



Source: For 2010, data are from Education At A Glance (OECD,2013) Chart B3.1; For 1995 and 2003, data are from Education At a Glance (OECD, 2006) Table B3.2

Chart 10: Availability of the Public Support to HE by Scholarships and Student Loans in country cluster



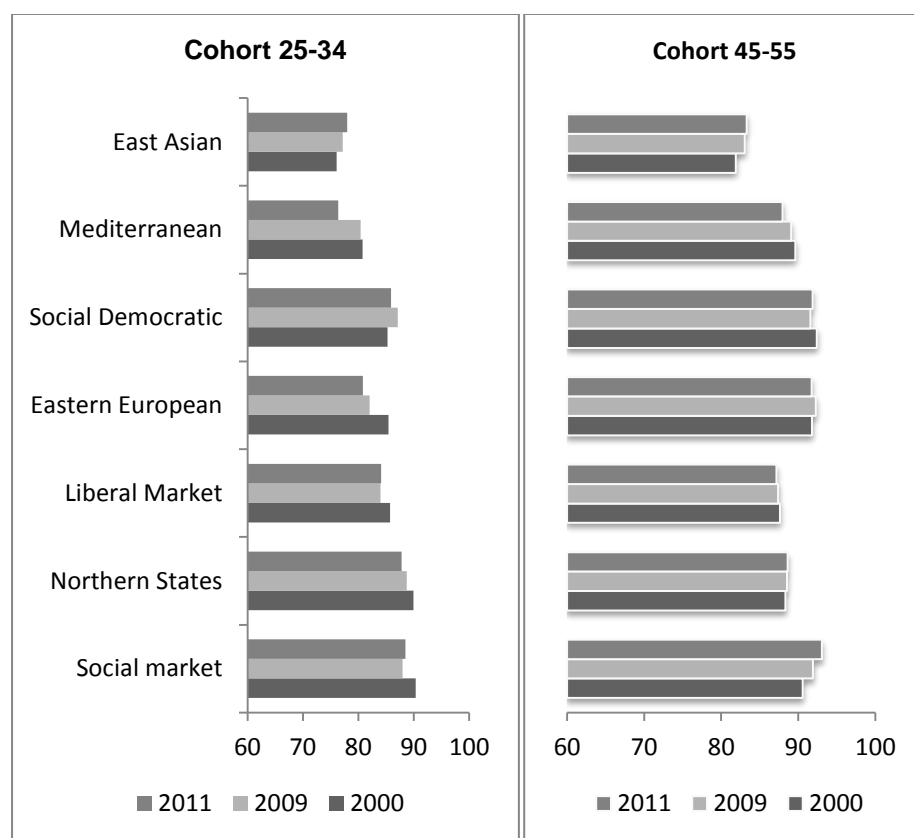
Source: Education At A Glance (OECD, 2013) Table B5.4

Note: 1. The base data, which refer to the direct public spending on higher education institutions and subsidies for households and private entities as percentage of the GDP, are multiplied by 100 to include the breakdown data on the public support such as scholarships/grants and public student loans.

2. L refers to the public student loans, which are in percentage of the total public support in higher education.

3. S refers to the scholarships and grants, which are in percentage of the total public support.

Chart 11: Employment rates by the 25-34 and 45-54 cohort with HE degrees between 2000 and 2011



Source: Education At A Glance (OECD, 2013) Table A5.3b